COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY PROGRAM POLICIES AND PROCEDURES

TITLE: AIR TOXICS PROGRAM PRIORITY IMPLEMENTATION POLICY

NUMBER: AQP-5

EFFECTIVE DATE: June 15, 1998

APPROVED: Dennis H. Treacy
Acting Director

PURPOSE

The purpose of this document is to set priorities for the implementation of Rules 4-3 and 5-3 concerning Emission Standards for Toxic Pollutants. These two rules were based on a broad range of substances identified as "any air pollutants for which no ambient air quality standards have been established." These substances include the 600 or so compounds included in the American Conference of Government Industrial Hygienists (ACGIH) Handbook.

BACKGROUND

A. The approach to regulating air toxics in the Commonwealth of Virginia since the promulgation of Rules 4-3 and 5-3 on January 1, 1985 has been to inventory the emissions of all sources of air toxics in the State and to require facility owners to reduce the levels of those emissions from individual facilities to levels that will provide protection of human health. Because this process involves gathering data for all compounds from each facility, the progress in inventorying these emissions from approximately 4,000 existing facilities and all new facilities has been slow. Furthermore, it is not clear that either approach efficiently and immediately evaluates the pollutants of greatest concern: those compounds identified by Congress and EPA as hazardous.

B. The priority now will be to limit reviews to only those hazardous air pollutants (HAPs) regulated under § 112 of the Clean Air Act. The ACGIH Handbook, which forms a key basis for establishing the Significant Ambient Air Concentration (SAAC) in Rules 4-3 and 5-3, will continue to be used until a review of Rules 4-3 and 5-3 in their entirety can be completed.

GENERAL REFERENCES

Regulations for the Control and Abatement of Air Pollution (9 VAC 5-40-160 A and 9 VAC 5-50-160 A).

LOCATION OF REFERENCED DOCUMENTS

The documents referenced above and any others that may be referenced throughout this document are available for viewing at the central office of the Department and are otherwise available as indicated below:

Regulations for the Control and Abatement of Air Pollution

The regulations are available for viewing at any regional office of the Department and copies are available upon request from the central office of the Department. A nominal fee may be required.

RECISION

AQP-5 dated September 1, 1996.

CONTACT

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DEFINITIONS

As used in this document, all terms not defined herein shall have the meaning given them in the Regulations for the Control and Abatement of Air Pollution (9 VAC 5 Chapters 10 through 80) (hereinafter the regulations), unless otherwise required by context.

STATEMENT OF POLICY

While it is the intention of the Board to implement the air toxics rules at all affected facilities in the State, constraints on resources compel that priorities be set for implementing the air toxics program under Rules 4-3 and 5-3. The authority of the Board to evaluate all air emissions of toxic pollutants from any affected facility in the Commonwealth is retained by regulation. The Department, through this policy, shall evaluate only the hazardous air pollutants regulated under § 112 of the Clean Air Act under Rules 4-3 and 5-3, as set out in the instructions below. No amendments may be made to any part of this policy without Board approval.

INSTRUCTIONS

A. **General.** Implementation of Rules 4-3 and 5-3 will be carried out by the Department with priority given to the pollutants listed in Attachment A.

1. **Implementation Priorities for Existing Facilities (Rule 4-3).** The following general principles are to be used by the Department in implementing Rule 4-3, which covers existing

facilities.

a. **All Affected Facilities.** All affected facilities subject to the rule shall submit data on emission rates of the pollutants listed in Attachment A upon request by the Department.

b. **Which Pollutants to Evaluate for All Affected Facilities.** For all affected facilities, the Department shall focus its evaluation on the pollutants listed in Attachment A.

c. **Meaning of Evaluation.** An evaluation means that the Department shall determine whether or not the facility is exempt for the pollutant and, if not exempt, whether or not the facility's emissions of a pollutant exceed the Significant Ambient Air Concentration (SAAC). If an exceedance of the SAAC is determined, the Department will notify the facility owner that the facility must come into compliance with the rule. The procedures used by the Department shall be those set out in Rule 4-3.

2. **Implementation Priorities for New and Modified Facilities (Rule 5-3).** The following general principles are to be used by the Department in implementing Rule 5-3, which covers new and modified facilities.

a. **All Affected Facilities.** All affected facilities subject to the rule shall submit data on emission rates of the pollutants listed in Attachment A that are or may be emitted with each new or modified source permit application.

b. **Which Pollutants to Evaluate for All Affected Facilities.** For all affected facilities, the Department shall focus its evaluation on the pollutants listed in Attachment A.

c. **Meaning of Evaluation.** The meaning of evaluation for new or modified facilities shall be the procedures used by the Department under Rule 5-3.

B. **Exceptions.** In instances in which there is concern for public health and the Department intends to develop recommendations to the Board concerning pollutants not appearing on the List of Priority Pollutants, emissions information on these pollutants may be requested from affected facilities.

C. **List of Priority Pollutants (Attachment A).** The list of priority pollutants is the set of compounds regulated under § 112 of the Clean Air Act as amended by EPA.

D. **Miscellaneous Implementation Policies.**

1. **SIC Code.** Where prioritizing facilities by SIC code is feasible, that approach to evaluation will be taken by the Department.

2. **Reevaluation Due to ACGIH Handbook TLV® Change.**

Facilities previously reviewed for a pollutant for which the TLV® value subsequently changes will not be required to be reviewed by the Department under any new TLV® value unless the facility is required to obtain a permit under 9 VAC 5 Chapter 80.

3. **Reevaluation for Previously Evaluated Facilities Due to 1991 Rule Changes.** Facilities previously reviewed by the Department under the program in effect from 1985 through September 1991 will not be required to be reviewed by the Department under the new rules unless the facility is required to obtain a permit under 9 VAC 5 Chapter 80.

4. **Synergistic Effects.** Synergistic effects will not be evaluated by the Department because this evaluation would require more knowledge than is readily available for many substances at this time.

E. **Implementation Deferrals.**

1. Implementation of the requirements of Rules 4-3 and 5-3 may be deferred by the Department for one or more affected facilities under the provisions of 9 VAC 5-40-160 A and 9 VAC 5-50-160 A when at least one of the following conditions occur:

a. Reasonable technical methods are not available to determine the ambient air concentration for a specific pollutant.

b. The configuration or function of the affected facility or facilities creates substantial difficulties in determining the public health impacts of the ambient air concentration for a specific pollutant.

c. The configuration or function of the affected facility or facilities creates substantial difficulties in determining the controls needed to limit the ambient air concentration to levels below the significant ambient air concentration for a specific pollutant.

2. A deferral shall be initiated by a representative of an affected facility or facilities. The application for the deferral must contain at a minimum the following information:

a. The names and addresses of those affected including the locations and descriptions of the affected facility or facilities.

b. An explanation of the basis for the deferral request.

c. Any other pertinent information the Department may request which may include, but not be limited to, a quantification of air quality impact from the affected facility or facilities' emissions, including the following:

1. An estimate of the emissions level (quantity) emitted.

2. Any current estimates of air quality impact (concentrations at the property line) and how these estimates were calculated.

3. Any anticipated changes in emission levels within the next two years.

3. A deferral may be granted by the Department for a time period not to exceed two years.

4. During the implementation deferral for any one or more facilities, the Department and the owners of the affected facilities will work together to establish specific milestones to resolve the issues that necessitated the request for the deferral. If the milestones are not met, the deferral may be withdrawn.

5. If the Department and the owner(s) agree that the resolution of the issues causing the deferral will result in the need to amend Rule 4-3 or Rule 5-3 or both, the Department will recommend to the Board that it begin the process to consider amending the rule(s).

ATTACHMENT

List of Priority Pollutants

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ATTACHMENT A - Priority Pollutants

CAS Number	Chemical Name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic acid
107131	Acrylonitrile
107051	Allyl chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	0-Anisidine
71432	Benzene (including benzene from gasoline)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl chloride
92524	Biphenyl
117817	Bis (2-ethylhexyl)phthalate (DEHP)
542881	Bis (chloromethyl) ether
75252	Bromoform
106990	1,3-Butadiene
156627	Calcium cyanamide
133062	Captan
63252	Carbaryl
75150	Carbon disulfide
56235	Carbon tetrachloride
463581	Carbonyl sulfide
120809	Catechol

CAS Number	Chemical Name
133904	Chloramben
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl methylether
126998	Chloroprene
1319773	Cresols/Cresylic acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol
98828	Cumene
94757	2,4-D, salts and esters
3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
64675	Diethyl sulfate

CAS Number	Chemical Name
119904	3,3-Dimethoxybenzidine
60117	Dimethyl aminoazobenzene
119937	3,3-Dimethyl benzidine
79447	Dimethyl carbamoyl chloride
68122	Dimethyl formamide
57147	1,1-Dimethyl hydrazine
131113	Dimethyl phthalate
77781	Dimethyl sulfate
534521	4,6-Dinitro-o-cresol, and salts
51285	2,4-Dinitrophenol
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4 Diethyleneoxide)
122667	1,2-Diphenylhydrazine
106898	Epichlorohydrin (1-Chloro -2,3-epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl acrylate
100414	Ethyl benzene
51796	Ethyl carbamate (Urethane)
75003	Ethyl chloride (Chloroethane)
106934	Ethylene dibromide (Dibromoethane)
107062	Ethylene dichloride (1,2-Dichloroethane)
107211	Ethylene glycol
151564	Ethylene imine (Aziridine)
75218	Ethylene oxide
96457	Ethylene thiourea
75343	Ethylidene dichloride (1,1-Dichloroethane)
50000	Formaldehyde

CAS Number	Chemical Name
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene
77474	Hexachlorocyclopentadiene
67721	Hexachloroethane
822060	Hexamethylene-1,6 -diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric acid
7664393	Hydrogen fluoride (Hydrofluoric acid)
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic anhydride
67561	Methanol
72435	Methoxychlor
74839	Methyl bromide (Bromomethane)
74873	Methyl chloride (Chloromethane)
71556	Methyl chloroform (1,1,1-Trichloroethane)
78933	Methyl ethyl ketone (2-Butanone)
60344	Methyl hydrazine
74884	Methyl iodide (Iodomethane)
108101	Methyl isobutyl ketone (Hexone)
624839	Methyl isocyanate
80626	Methyl methacrylate
1634044	Methyl tert butyl ether

CAS Number	Chemical Name
101144	4,4-Methylene bis (2-chloroaniline)
75092	Methylene chloride (Dichloromethane)
101688	Methylene diphenyl diisocyanate (MDI)
101779	4,4-Methylenedianiline
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (Aroclors)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Popylene dichloride (1,2 Dichloropropane)
75569	Propylene oxide

CAS Number	Chemical Name
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene oxide
1746016	2,3,7,8-Tetrachlorodibenzo -p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixture)
95476	o-Xylenes

CAS Number	Chemical Name
108383	m-xylenes
106423	p-Xylenes
0	Antimony Compounds
0	Arsenic Compounds (inorganic including arsine)
0	Beryllium Compounds
0	Cadmium Compounds
0	Chromium Compounds
0	Cobalt Compounds
0	Coke Oven Emissions
0	Cyanide Compounds[1]
0	Glycol ethers[2] with TLV®s
0	Lead Compounds
0	Manganese Compounds
0	Mercury Compounds
0	Nickel Compounds
0	Polycylic Organic Matter[3]
0	Selenium Compounds

NOTE: For all listings above which contain the word "compounds" and for the glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

[1]X'CN where X = H' or any other group where a formal dissociation may occur. For example, KCN or $Ca(CN)_2$

[2]Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R(OCH2CH2)_n$-OR' where

n = 1, 2, or 3

R = alkyl or arylgroups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure: $R(OCH2CH)_n$-OH. Polymers are excluded from the glycol category.

[3]Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.